1153-05-251 **Michael Santana*** (santanmi@gvsu.edu), Grand Valley State University, Allendale, MI 49401, and **Maia Wichman**. *Minimum degree conditions for the existence of disjoint doubly chorded cycles.* Preliminary report.

In 1963, Corrádi and Hajnal verified a conjecture of Erdős by showing that for all $k \in \mathbb{Z}^+$, if a graph G has at least $3k$ vertices and $\delta(G) \geq 2k$, then G will contain k disjoint cycles. This result, which is best possible, has served as motivation behind many recent results in finding sharp minimum degree conditions that guarantee the existence of a variety of structures. In particular, Qiao and Zhang in 2010, showed that if G has at least $4k$ vertices and $\delta(G) \geq \lfloor \frac{7k}{2} \rfloor$, then G contains k disjoint doubly chorded cycles. Then in 2015, Gould, Hirohata, and Horn proved that if G has at least $6k$ vertices, then $\delta(G) \geq 3k$ is sufficient to guarantee k disjoint doubly chorded cycles. In this talk, we extend the result of Gould et al. by showing that $\delta(G) \geq 3k$ suffices for graphs on at least $5k$ vertices (which is best possible for the given minimum degree), and we present an improvement of the Qiao and Zhang condition to $\delta(G) \geq \lceil \frac{10k-1}{3} \rceil$, which is sharp. This is joint work with Maia Wichman. (Received August 29, 2019)